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EXAMINER
COUSO, JOSE L

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 February 2006*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-20* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a) ☒ All b) ☐ Some * c) ☐ None of:
         1. ☒ Certified copies of the priority documents have been received.
         2. ☐ Certified copies of the priority documents have been received in Application No. _____.
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1.   Claims 1-11 and 14-20 are rejected under 35 U.S.C. 101 as not falling within one

of the four statutory categories of invention.   Supreme Court precedent[1] and recent

Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must

(1) be tied to another statutory category (such as a particular apparatus), or (2)

transform underlying subject matter (such as an article or material) to a different state or

thing. While the instant claim(s) recite a series of steps or acts to be performed, the

claim(s) neither transform underlying subject matter nor positively tie to another

statutory category that accomplishes the claimed method steps, and therefore do not

qualify as a statutory process.   For example the compression method including steps of

capturing, converting reshaping, encoding and storing are of sufficient breadth that it

would be reasonably interpreted as a series of steps completely performed mentally,

verbally or without a machine. The Applicant has provided no explicit and deliberate

definitions of "capturing", "converting", "reshaping", "encoding" and "storing" to limit the

steps and the claim language itself is sufficiently broad to read on a person mentally

going through the steps.

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in
> public use or on sale in this country, more than one year prior to the date of application for patent in
> the United States.

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[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk
v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

3.   Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Bovik et al. (U.S. Patent No. 5,282,255).

With regard to claim 1, Bovik describes data of an image wherein each element is compared with a previous element and if they are both equal, a first value is recorded and if they are not both equal, a second value is recorded (refer for example to column 28, lines 50-52).

As to claim 2, Bovik describes wherein each element is a pixel (refer for example to column 28, lines 45-52).

In regard to claim 3, Bovik describes wherein the first value is a 1, and the second value is a 0 (refer for example to column 28, lines 50-52).

With regard to claim 4, Bovik describes wherein the first and second values are stored in a bit plane (see figure 15).

As to claim 5, Bovik describes wherein for a one-dimensional compression, a single bit plane is used to store the values (see figure 15, wherein for one-dimensional compression it would be inherent for a single bit plane to store the values).

In regard to claim 6, Bovik describes wherein for a two-dimensional compression, comparison is in both horizontal and vertical directions, a separate bit plane being used for each direction (see figure 15, wherein for two-dimensional compression it would be inherent for separate bit planes to store the values).

With regard to claim 7, Bovik describes wherein the bit-planes for the horizontal and vertical directions are combined by binary addition to form a repetition coded compression bit-plane (refer for example to column 25, lines 13-61).

As to claim 8, Bovik describes wherein the combining is by binary addition, only the second values being stored for lossless reconstruction of the image (refer for example to column 25, lines 13-61).

In regard to claim 9, Bovik describes wherein the result of the combining is repetition coded compression data values, all other image data values being able to be reconstructed using the repetition coded compression data values, and the bit planes for the horizontal and vertical directions (refer for example to column 25, lines 13-61).

With regard to claim 10, Bovik describes wherein storage in bit planes is in a matrix (as clearly illustrated in figure 15).

As to claim 11, Bovik describes wherein a single mathematical operation is performed for each element (refer for example to column 28, lines 45-48).

In regard to claim 12, Bovik describes a camera for capturing at least one image and for supplying digital data (see figure 1, elements 11 and 12, and refer for example to column 8, lines 41-54); a reshaping block for rearranging the digital data into a matrix of image data values (see figure 1, element 12, and refer for example to column 8, lines 41-54); a processor for receiving the matrix of image data values and compressing the image data values to form compressed data (see figure 1, element 16, and refer for example to column 8, line 66 through column 9, line 6); and a memory for storage of the compressed data (see figure 1, element 21, and refer for example to column 9, lines 19-20).

With regard to claim 13, Bovik describes wherein the camera is analog, an analog-to-digital converter being used to convert the analog image to provide the digital data (see figure 1, elements 11 and 12, and refer for example to column 8, lines 41-54).

As to claim 14, Bovik describes capturing the image (see figure 1, element 11, and refer for example to column 8, lines 41-54); converting the image into digital form to provide digital data (see figure 1, element 12, and refer for example to column 8, lines 41-54); reshaping the digital data into a digital data matrix (see figure 1, element 12, and refer for example to column 8, lines 41-54); encoding repetitions in the digital data matrix into a bit-plane index, and stored data values (see figure 1, element 16, and refer for example to column 8, line 66 through column 9, line 6); and storing the compressed data in a storage memory (see figure 1, element 21, and refer for example to column 9, lines 19-20).

In regard to claim 15, Bovik describes wherein there the bit-planes containing information regarding the repetitions along horizontal and vertical directions (as clearly illustrated in figure 15).

With regard to claim 16, Bovik describes wherein there is further included combining the horizontal and vertical bit-planes by a binary addition operation to give a repetition coded compression bit-plane (as clearly illustrated in figure 15).

As to claim 17, Bovik describes further including comparing the repetition coded compression bit-plane with the digital data matrix to obtain final repetition coded compression data values (refer for example to column 25, lines 13-61).

In regard to claim 18, Bovik describes further including storing and archiving the repetition coded compression data values along with the horizontal and vertical bit-planes (as clearly illustrated in figure 15) (refer for example to column 25, lines 13-61).

With regard to claim 19, Bovik describes wherein the compression is lossless.

As to claim 20, Bovik describes further including compression by comparison with a threshold value to achieve lossy compression and a significantly higher compression ratio (refer for example to column 29, lines 25-49).

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Toyokawa, Streater, Hrusecky et al. , and Shiraishi ('702) and ('557) all disclose systems similar to applicant's claimed invention.

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (571) 272-7388. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner, can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jose L. Couso/
Primary Examiner, Art Unit 2624
February 2, 2009